

SEQUENCE LISTING

<110> ROCH, Philippe
 MITTA, Guillaume
 HUBERT, Florence
 NOEL, Thierry
 CNRS
 IFREMER

<120> ANTIMICROBIAL PEPTIDES DERIVED FROM MOLLUSKS

<130> 045636-5052-US

<140>

<141>

<150> FR 9908858

<151> 1999-07-08

<150> PCT/FR00/01975

<151> 2000-07-07

<160> 7

<210> 1

<211> 663

<212> DNA

<213> *Mytilus galloprovincialis*

<220>

<221> CDS

<222> (43)..(330)

<220>

<221> mat_peptide

<222> (103)..(222)

<220>

<221> sig_peptide

<222> (43)..(102)

<400> 1

aaggataata ttttgattta actgcaaact caaacgtaca at atg aag gca aca	54
Met Lys Ala Thr	
-20	
atc ttg tta gca gtt cta gtg gca gtc ttt gtc gca ggt acg gaa gct	102
Ile Leu Leu Ala Val Leu Val Ala Val Phe Val Ala Gly Thr Glu Ala	
-15 -10 -5 -1	
cat tcg cac gct tgt aca tca tac tgg tgt ggt aag ttt tgt gga act	150
His Ser His Ala Cys Thr Ser Tyr Trp Cys Gly Lys Phe Cys Gly Thr	
1 5 10 15	
gct agt tgc aca cat tat cta tgc aga gta ctc cat ccc ggt aaa atg	198
Ala Ser Cys Thr His Tyr Leu Cys Arg Val Leu His Pro Gly Lys Met	
20 25 30	
tgc gca tgt gtt cat tgc agc agg gtg aac aat cct ttc aga gtt aat	246
Cys Ala Cys Val His Cys Ser Arg Val Asn Asn Pro Phe Arg Val Asn	
35 40 45	

caa gtt gct aaa agt att aac gat ttg gat tac act cca ata atg aag 294
 Gln Val Ala Lys Ser Ile Asn Asp Leu Asp Tyr Thr Pro Ile Met Lys
 50 55 60

tcg atg gaa aac ttg gac aat gga atg gat atg tta taagcaaaca 340
 Ser Met Glu Asn Leu Asp Asn Gly Met Asp Met Leu
 65 70 75

acttatgcaa tgcagatcac aactgtgaat ctttgctatc attctcactg cttttcacct 400
 ttcaacaaac gaaaaattat cagcaacttg aaaaataaca aacttgagtc atgtctgttc 460
 agtttccagt ctaatattta tatcattata tgaaagggtat aacaaaatta gtaccattgt 520
 gttctaataag aaacaattta taaacaagaa acattacact ttaagtataa attaacagga 580
 ttttgtcctg cagctgtttt atctttcttt tctcagctat agtcttctga ttgtaataaa 640
 atagcttgaa aaaaaaaaaa aaa 663

<210> 2
 <211> 96
 <212> PRT
 <213> Mytilus galloprovincialis

<400> 2
 Met Lys Ala Thr Ile Leu Leu Ala Val Leu Val Ala Val Phe Val Ala
 1 5 10 15
 Gly Thr Glu Ala His Ser His Ala Cys Thr Ser Tyr Trp Cys Gly Lys
 20 25 30
 Phe Cys Gly Thr Ala Ser Cys Thr His Tyr Leu Cys Arg Val Leu His
 35 40 45
 Pro Gly Lys Met Cys Ala Cys Val His Cys Ser Arg Val Asn Asn Pro
 50 55 60
 Phe Arg Val Asn Gln Val Ala Lys Ser Ile Asn Asp Leu Asp Tyr Thr
 65 70 75 80
 Pro Ile Met Lys Ser Met Glu Asn Leu Asp Asn Gly Met Asp Met Leu
 85 90 95

<210> 3
 <211> 681
 <212> DNA
 <213> Mytilus galloprovincialis

<220>
 <221> CDS
 <222> (13)..(300)

<220>
 <221> mat_peptide
 <222> (73)..(192)

<220>

<221> sig_peptide

<222> (13)..(72)

<400> 3

caaacgtaca ac atg aag gca aca atg ttg tta gca gtt gta gtg gct gtc 51
 Met Lys Ala Thr Met Leu Leu Ala Val Val Val Ala Val
 -20 -15 -10

ttt gtc gca ggt aca gaa gct cat ccg cat gtt tgc aca tcg tac tac 99
 Phe Val Ala Gly Thr Glu Ala His Pro His Val Cys Thr Ser Tyr Tyr
 -5 -1 1 5

tgt agc aag ttt tgt ggg act gct ggt tgc aca cgt tat gga tgc cga 147
 Cys Ser Lys Phe Cys Gly Thr Ala Gly Cys Thr Arg Tyr Gly Cys Arg
 10 15 20 25

aat ctc cat cgc ggg aag ctt tgc ttc tgt ctt cat tgc agc agg gtg 195
 Asn Leu His Arg Gly Lys Leu Cys Phe Cys Leu His Cys Ser Arg Val
 30 35 40

aag ttc ccg ttt gga gca act caa gat gct aaa agt atg aac gaa ctg 243
 Lys Phe Pro Phe Gly Ala Thr Gln Asp Ala Lys Ser Met Asn Glu Leu
 45 50 55

gaa tac act cca ata atg aag tcg atg gaa aat ttg gac aac gga atg 291
 Glu Tyr Thr Pro Ile Met Lys Ser Met Glu Asn Leu Asp Asn Gly Met
 60 65 70

gat atg tta taagcaaact tatgacatga agatcacaac tgtatacttt 340
 Asp Met Leu
 75

tgctattcct gtatccgctt tactcctttc ttcacacttt gtacggaatc cgtcaacaga 400

aaattcatca tcaacttgaa aactaacaaa agatgtgtcg cacacgttac actcaccagt 460

ccataagtta tatcattaaa aaaagatgaa tcaagttacc gttaacgtgt gttcagatat 520

atctctgaca gaagaagtaa ctgttaacaa gaaatactgt tttccctcaa gttattaaaa 580

attagaagtc tccttgcaac tgttttatct ttccttactc agttcttttt tcatgttcta 640

ataaaacagt ttgaaatgaa caaaaaaaaaa aaaaaaaaaa a 681

<210> 4

<211> 96

<212> PRT

<213> Mytilus galloprovincialis

<400> 4

Met Lys Ala Thr Met Leu Leu Ala Val Val Val Ala Val Phe Val Ala
 1 5 10 15

Gly Thr Glu Ala His Pro His Val Cys Thr Ser Tyr Tyr Cys Ser Lys
 20 25 30

Phe Cys Gly Thr Ala Gly Cys Thr Arg Tyr Gly Cys Arg Asn Leu His
 35 40 45

Arg Gly Lys Leu Cys Phe Cys Leu His Cys Ser Arg Val Lys Phe Pro
 50 55 60

Phe Gly Ala Thr Gln Asp Ala Lys Ser Met Asn Glu Leu Glu Tyr Thr
 65 70 75 80

Pro Ile Met Lys Ser Met Glu Asn Leu Asp Asn Gly Met Asp Met Leu
 85 90 95

<210> 5
 <211> 40
 <212> PRT
 <213> Mytilus galloprovincialis

<220>
 <221> misc_feature
 <222> (2)..(2)
 <223> Xaa can be Pro or Ser

<220>
 <221> misc_feature
 <222> (4)..(4)
 <223> Xaa can be Val or Ala

<220>
 <221> misc_feature
 <222> (9)..(9)
 <223> Xaa can be Tyr or Trp

<220>
 <221> misc_feature
 <222> (11)..(18)
 <223> Xaa can be Ser or Gly

<220>
 <221> misc_feature
 <222> (21)..(21)
 <223> Xaa can be Arg or His

<220>
 <221> misc_feature
 <222> (23)..(23)
 <223> Xaa can be Gly or Leu

<220>
 <221> misc_feature
 <222> (26)..(26)
 <223> Xaa can be Asn or Val

<220>
 <221> misc_feature
 <222> (29)..(29)
 <223> Xaa can be Arg or Pro

<220>
 <221> misc_feature
 <222> (32)..(32)
 <223> Xaa can be Leu or Met

<220>

<221> misc_feature
 <222> (34)..(34)
 <223> Xaa can be Phe or Ala

<220>
 <221> misc_feature
 <222> (36)..(36)
 <223> Xaa can be Leu or Val

<400> 5
 His Xaa His Xaa Cys Thr Ser Tyr Xaa Cys Xaa Lys Phe Cys Gly Thr
 1 5 10 15
 Ala Xaa Cys Thr Xaa Tyr Xaa Cys Arg Xaa Leu His Xaa Gly Lys Xaa
 20 25 30
 Cys Xaa Cys Xaa His Cys Ser Arg
 35 40

<210> 6
 <211> 40
 <212> PRT
 <213> Mytilus galloprovincialis

<400> 6
 His Ser His Ala Cys Thr Ser Tyr Trp Cys Gly Lys Phe Cys Gly Thr
 1 5 10 15
 Ala Ser Cys Thr His Tyr Leu Cys Arg Val Leu His Pro Gly Lys Met
 20 25 30
 Cys Ala Cys Val His Cys Ser Arg
 35 40

<210> 7
 <211> 40
 <212> PRT
 <213> Mytilus galloprovincialis

<400> 7
 His Pro His Val Cys Thr Ser Tyr Tyr Cys Ser Lys Phe Cys Gly Thr
 1 5 10 15
 Ala Gly Cys Thr Arg Tyr Gly Cys Arg Asn Leu His Arg Gly Lys Leu
 20 25 30
 Cys Phe Cys Leu His Cys Ser Arg
 35 40

SEQUENCE LISTING

<110> CNRS
IFREMER
ROCH, Philippe
MITTA, Guillaume
HUBERT, Florence
NOEL, Thierry

<120> ANTIMICROBIAL PEPTIDES DERIVED FROM MOLLUSCS

<130> MJPCb644/43

<140>

<141>

<150> FR 9908858

<151> 1999-07-08

<160> 4

<210> 1

<211> 663

<212> DNA

<213> Mytilus galloprovincialis

<220>

<221> CDS

<222> (43)..(330)

<220>

<221> mat_peptide

<222> (103)..(222)

<220>

<221> sig_peptide

<222> (43)..(102)

<400> 1

aaggataata ttttgattta actgcaaact caaacgtaca at atg aag gca aca 54
Met Lys Ala Thr
-20

atc ttg tta gca gtt cta gtg gca gtc ttt gtc gca ggt acg gaa gct 102
Ile Leu Leu Ala Val Leu Val Ala Val Phe Val Ala Gly Thr Glu Ala
-15 -10 -5 -1

cat tcg cac gct tgt aca tca tac tgg tgt ggt aag ttt tgt gga act 150
His Ser His Ala Cys Thr Ser Tyr Trp Cys Gly Lys Phe Cys Gly Thr
1 5 10 15

gct agt tgc aca cat tat cta tgc aga gta ctc cat ccc ggt aaa atg 198
Ala Ser Cys Thr His Tyr Leu Cys Arg Val Leu His Pro Gly Lys Met
20 25 30

tgc gca tgt gtt cat tgc agc agg gtg aac aat cct ttc aga gtt aat 246
Cys Ala Cys Val His Cys Ser Arg Val Asn Asn Pro Phe Arg Val Asn
35 40 45

caa gtt gct aaa agt att aac gat ttg gat tac act cca ata atg aag 294
 Gln Val Ala Lys Ser Ile Asn Asp Leu Asp Tyr Thr Pro Ile Met Lys
 50 55 60

tcg atg gaa aac ttg gac aat gga atg gat atg tta taagcaaaca 340
 Ser Met Glu Asn Leu Asp Asn Gly Met Asp Met Leu
 65 70 75

acttatgcaa tgcagatcac aactgtgaat ctttgctatc atttctactg cttttcacct 400
 ttcaacaaac gaaaaattat cagcaacttg aaaaataaca aacttgagtc atgtctgttc 460
 agtttccagt ctaatatatta tatcattata tgaaagggtat aacaaaatta gtaccattgt 520
 gttctaatag aaacaattta taaacaagaa acattacact ttaagtataa attaacagga 580
 ttttgtcctg cagctgtttt atctttcttt tctcagctat agtcttctga ttgtaataaa 640
 atagcttgaa aaaaaaaaaa aaa 663

<210> 2
 <211> 96
 <212> PRT
 <213> Mytilus galloprovincialis

<400> 2
 Met Lys Ala Thr Ile Leu Leu Ala Val Leu Val Ala Val Phe Val Ala
 1 5 10 15
 Gly Thr Glu Ala His Ser His Ala Cys Thr Ser Tyr Trp Cys Gly Lys
 20 25 30
 Phe Cys Gly Thr Ala Ser Cys Thr His Tyr Leu Cys Arg Val Leu His
 35 40 45
 Pro Gly Lys Met Cys Ala Cys Val His Cys Ser Arg Val Asn Asn Pro
 50 55 60
 Phe Arg Val Asn Gln Val Ala Lys Ser Ile Asn Asp Leu Asp Tyr Thr
 65 70 75 80
 Pro Ile Met Lys Ser Met Glu Asn Leu Asp Asn Gly Met Asp Met Leu
 85 90 95

<210> 3
 <211> 681
 <212> DNA
 <213> Mytilus galloprovincialis

<220>
 <221> CDS
 <222> (13)..(300)

<220>
 <221> mat_peptide
 <222> (73)..(192)

<220>

<221> sig_peptide

<222> (13)..(72)

<400> 3

caaacgtaca ac atg aag gca aca atg ttg tta gca gtt gta gtg gct gtc 51
 Met Lys Ala Thr Met Leu Leu Ala Val Val Val Ala Val
 -20 -15 -10

ttt gtc gca ggt aca gaa gct cat ccg cat gtt tgc aca tcg tac tac 99
 Phe Val Ala Gly Thr Glu Ala His Pro His Val Cys Thr Ser Tyr Tyr
 -5 -1 1 5

tgt agc aag ttt tgt ggg act gct ggt tgc aca cgt tat gga tgc cga 147
 Cys Ser Lys Phe Cys Gly Thr Ala Gly Cys Thr Arg Tyr Gly Cys Arg
 10 15 20 25

aat ctc cat cgc ggg aag ctt tgc ttc tgt ctt cat tgc agc agg gtg 195
 Asn Leu His Arg Gly Lys Leu Cys Phe Cys Leu His Cys Ser Arg Val
 30 35 40

aag ttc ccg ttt gga gca act caa gat gct aaa agt atg aac gaa ctg 243
 Lys Phe Pro Phe Gly Ala Thr Gln Asp Ala Lys Ser Met Asn Glu Leu
 45 50 55

gaa tac act cca ata atg aag tcg atg gaa aat ttg gac aac gga atg 291
 Glu Tyr Thr Pro Ile Met Lys Ser Met Glu Asn Leu Asp Asn Gly Met
 60 65 70

gat atg tta taagcaaact tatgacatga agatcacaac tgtatacttt 340
 Asp Met Leu
 75

tgctattcct gtatccgctt tactcctttc ttcacacttt gtacggaatc cgtcaacaga 400

aaattcatca tcaacttgaa aactaacaaa agatgtgtcg cacacgttac actcaccagt 460

ccataagtta tatcattaaa aaaagatgaa tcaagttacc gttaacgtgt gttcagatat 520

atctctgaca gaagaagtaa ctgttaacaa gaaatactgt tttccctcaa gttattaaaa 580

attagaagtc tccctgcaac tgttttatct ttccttactc agttcttttt tcatgttcta 640

ataaaacagt ttgaaatgaa caaaaaaaaaa aaaaaaaaaa a 681

<210> 4

<211> 96

<212> PRT

<213> Mytilus galloprovincialis

<400> 4

Met Lys Ala Thr Met Leu Leu Ala Val Val Val Ala Val Phe Val Ala
 1 5 10 15

Gly Thr Glu Ala His Pro His Val Cys Thr Ser Tyr Tyr Cys Ser Lys
 20 25 30

Phe Cys Gly Thr Ala Gly Cys Thr Arg Tyr Gly Cys Arg Asn Leu His
 35 40 45

Arg Gly Lys Leu Cys Phe Cys Leu His Cys Ser Arg Val Lys Phe Pro
50 55 60

Phe Gly Ala Thr Gln Asp Ala Lys Ser Met Asn Glu Leu Glu Tyr Thr
65 70 75 80

Pro Ile Met Lys Ser Met Glu Asn Leu Asp Asn Gly Met Asp Met Leu
85 90 95